

**IN THE CLAIMS:**

Please **AMEND** claims 1 and 5, and **ADD** claims 6-20, as follows:

1. (CURRENTLY AMENDED) An apparatus for forming a recording pattern and an erase pattern alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level, respectively, in an optical recording apparatus, comprising:

a recording waveform generating unit generating a recording waveform which includes a first multi-pulse having a plurality of first pulses to form the recording pattern in response to the first level of the input data and a second multi-pulse having a plurality of second pulses to form the erase pattern in response to the second level of the input data, wherein a power level of a leading one of the second pulses of the erase pattern is a low level of the second multi-pulse and a power level of a trailing one of the second pulses of the erase pulse is a high level of the second multi-pulse.

2. (ORIGINAL) The apparatus of claim 1, wherein the recording waveform generating unit generates a cooling pulse as a portion of the first multi-pulse and another portion of the second multi-pulse.

3. (ORIGINAL) The apparatus of claim 1, wherein the first pulses of the first multi-pulse each have a first duty cycle and a first amplitude, and the second pulses of the second multi-pulse each have a second duty cycle different from the first duty cycle and a second amplitude different from the first amplitude.

4. (ORIGINAL) The apparatus of claim 1, further comprising:

a pickup unit forming a mark corresponding to the recording pattern on the optical disc in response to the first pulses of the first multi-pulse and erasing another mark to form a space corresponding to the erase pattern on the optical disc in response to the second pulses of the second multi-pulse.

5. (CURRENTLY AMENDED) An apparatus for forming a recording pattern and an erase pattern alternatively and sequentially on an information storage medium in response to input data having a first level and a second level, respectively, in a recording apparatus, comprising:

a recording waveform generating unit generating a recording waveform which comprises the recording pattern corresponding to the first level of the input data, the erase pattern having a multi-pulse corresponding to the second level of the input data, and a cooling pulse concatenating the recording and erase patterns, wherein a power level of a leading pulse of the erase pattern is a low level of the multi-pulse and a power level of a trailing pulse of the erase pulse is a high level of the multi-pulse.

6. (NEW) The apparatus of claim 5, wherein the generating unit adjusts a pulse of the recording pattern according to a pulse of the multi-pulse of the erase pattern.

7. (NEW) An apparatus for forming a recording pattern and an erase pattern alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level, respectively, in an optical recording apparatus, comprising:

a recording waveform generating unit which receives the input data modulated according to according to a Run Length Limited (RLL)(1, 7) and generates a recording waveform which includes a first multi-pulse having a plurality of first pulses to form the recording pattern in response to the first level of the input data and a second multi-pulse having a plurality of second pulses to form the erase pattern in response to the second level of the input data; and

a pickup forming a mark or a space by using the generated recording and erasing waveforms.

8. (NEW) The apparatus of claim 1, wherein the recording waveform generating unit generates the recording waveform using the input data modulated according to a Run Length Limited (RLL)(1, 7) method.

9. (NEW) The apparatus of claim 2, wherein the recording waveform comprises another recording pattern formed of another multi-pulse, and the recording waveform generating unit adjusts a first one of the multi-pulses of the another recording pattern to have a power that is other than or equal to a power of a first one of the multi-pulses of the erase pattern.

10. (NEW) The apparatus of claim 9, wherein the power of the first one of the multi-pulses of the erase pattern is equal to the power of the first one of the multi-pulses of the another recording pattern.

11. (NEW) The apparatus of claim 9, wherein the power of the first one of the multi-pulses of the erase pattern is other than the power of the first one of the multi-pulses of the another recording pattern.

12. (NEW) The apparatus of claim 9, wherein the multi-pulse of the erase pattern has a first pulse power and a second pulse power greater than the first pulse power.

13. (NEW) The apparatus of claim 10, wherein the multi-pulse of the erase pattern has a first pulse power and a second pulse power greater than the first pulse power, and the power of the first one of the multi-pulses of the erase pattern is equal to the first pulse power.

14. (NEW) The apparatus of claim 11, wherein the multi-pulse of the erase pattern has a first pulse power and a second pulse power greater than the first pulse power, and the power of the first one of the multi-pulses of the recording pattern is equal to the first pulse power.

15. (NEW) The apparatus of claim 9, wherein the multi-pulse of the another recording pattern further comprises a recording pulse having a recording power greater than the power of the first one of the pulses of the another recording pattern.

16. (NEW) The apparatus of claim 1, wherein the recording waveform further comprises a cooling pulse concatenating and included in the recording and erase patterns and having a cooling power less than a power of a last pulse of the first multi-pulse of the recording pattern and a power of a first pulse of the second multi-pulse of the erase pattern.

17. (NEW) The apparatus of claim 2, wherein the cooling pulse has a cooling power less than the power of a last pulse of the first multi-pulse of the recording pattern and a power of a first pulse of the second multi-pulse of the erase pattern.

18. (NEW) The apparatus of claim 5, wherein the cooling pulse has a cooling power less than a recording power of the recording pattern and a power of a first pulse of the multi-pulse of the erase pattern.

19.(NEW) An apparatus for forming a recording pattern and an erase pattern alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level, respectively, in an optical recording apparatus, comprising:

a recording waveform generating unit generating a recording waveform which includes a first multi-pulse having a plurality of first pulses to form the recording pattern in response to the first level of the input data, and a second multi-pulse having a plurality of second pulses to form the erase pattern in response to the second level of the input data and having a power level of a leading one of the second pulses of the erase pattern set to be a high level of the second multi-pulse and a power level of a trailing one of the second pulses to be a high level of the second multi-pulse.

20.(NEW) An apparatus for forming a recording pattern and an erase pattern alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level, respectively, in an optical recording apparatus, comprising:

a recording waveform generating unit generating a recording waveform which includes a first multi-pulse having a plurality of first pulses to form the recording pattern in response to the first level of the input data ,and a second multi-pulse having a plurality of second pulses to form the erase pattern in response to the second level of the input data, wherein a power level of a leading second pulse of the erase pattern is set to be a low level of the second multi-pulse and a power level of a trailing second pulse is set to be a low level of the second multi-pulse.